

***PINUS CONTORTA* VAR. *CONTORTA* -
PSEUDOTSUGA MENZIESII / *GAULTHERIA SHALLON***

Lodgepole pine - Douglas-fir / salal
Abbreviated Name: PICO-PSME/GASH

Sample size = 17 plots

DISTRIBUTION: San Juan, western Skagit (Cypress and Fidalgo islands) and Mason counties. Probably also occurs in southwestern BC.

GLOBAL/STATE STATUS: G1G2S1. Largely dependent on a specific fire regime or landscape-level fire mosaic. Very few occurrences of relatively good quality remain (5 are known). Continued fire suppression is a long-term threat that will likely result in loss of this association on most sites as lodgepole pine dies out in succession.

ID TIPS: Dominated or co-dominated by lodgepole pine with Douglas-fir at least present. Understory dominated or co-dominated by salal. Located in the Puget Trough.

ENVIRONMENT: These sites are dry to moderately dry and appear to be relatively nutrient-poor. Occurs on gravelly sandy loam outwash deposits, glacial till, and sedimentary residuum. Soil depth can be quite shallow. Occurs on variable aspects, including flat terrain.

Precipitation: 21-77 inches (mean 62)

Elevation: 80-2300 feet

Aspect/slope: ENE to NW/ 0-50% slope (mean 7)

Slope position: plain, mid, upper, short

Soil series: Everett (Grove), Shelton, Pickett, Roche, rock outcrop

DISTURBANCE/SUCCESSION: On most sites except the very driest, this association is an early- to mid-seral successional stage that will progress in the absence of disturbance (probably between stand age 100 and 250 years) to dominance by Douglas-fir and/or western hemlock (PSME/GASH-HODI, PSME-TSHE/GASH-HODI, PSME-TSHE/VAOV, and PSME-TSHE/RHMA-VAOV associations). This association would have likely been maintained in a shifting mosaic on the landscape by high-severity fires. Some of these stands may have grown up on what were, in pre-Western settlement times, open Douglas-fir savannas.

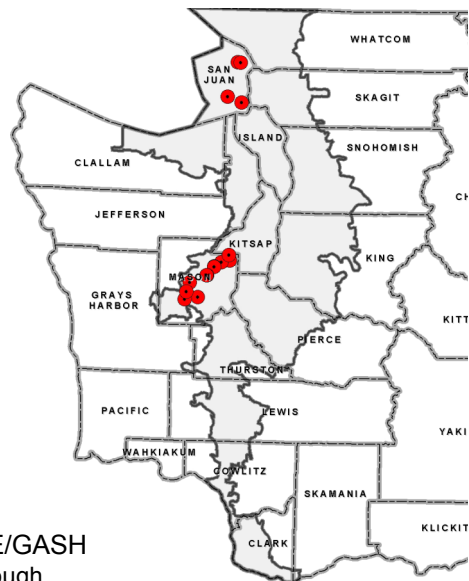
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Vegetation Composition Table (selected species):

Con = constancy, the percent of plots within which each species was found;
Cov = cover, the mean crown cover of the species in plots where it was found.

Trees	Kartesz 2003 Name	Con	Cov
lodgepole pine	<i>Pinus contorta</i> var. <i>contorta</i>	100	42
Douglas-fir	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	100	32
western hemlock	<i>Tsuga heterophylla</i>	35	1
western white pine	<i>Pinus monticola</i>	29	2
Shrubs, Subshrubs			
salal	<i>Gaultheria shallon</i>	100	61
trailing blackberry	<i>Rubus ursinus</i> var. <i>macropetalus</i>	76	1
baldhip rose	<i>Rosa gymnocarpa</i>	71	2
evergreen huckleberry	<i>Vaccinium ovatum</i>	65	12
dwarf Oregongrape	<i>Mahonia nervosa</i>	53	4
oceanspray	<i>Holodiscus discolor</i>	35	3
pipsissewa	<i>Chimaphila umbellata</i> ssp. <i>occidentalis</i>	24	3
tall Oregongrape	<i>Mahonia aquifolium</i>	24	1
Pacific rhododendron	<i>Rhododendron macrophyllum</i>	18	11
spreading snowberry	<i>Symphoricarpos hesperius</i>	18	6
Forbs and Ferns			
bracken fern	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	82	6
rattlesnake-plantain	<i>Goodyera oblongifolia</i>	53	+
twinline	<i>Linnaea borealis</i> ssp. <i>longiflora</i>	47	2
western starflower	<i>Trientalis borealis</i> ssp. <i>latifolia</i>	29	+
beargrass	<i>Xerophyllum tenax</i>	18	7

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VEGETATION: Forest dominated or co-dominated by lodgepole pine, with Douglas-fir typically co-dominant or at least prominent in the sapling layer. Western hemlock is present in some stands, mainly as saplings or small trees. The understory is dominated by salal, often with evergreen huckleberry, or occasionally Pacific rhododendron, prominent to co-dominant. Baldhip rose and trailing blackberry are usually present. The herb layer is poorly developed and consists mainly of bracken fern. In Mason Co., beargrass is occasionally present to prominent.

CLASSIFICATION NOTES: Not previously described in the literature. NatureServe (2004) currently lists this association as PICO/GASH.

MANAGEMENT NOTES: On most sites, this association is dependent on a landscape fire regime that no longer exists. The need for high-severity fire to maintain the association probably rules out prescribed fire as a management tool. The future outlook appears doubtful for the long-term survival of the association with natural processes. Perhaps semi-natural occurrences could be created by allowing natural regeneration on clearcuts with potential for the type, and not cutting out the pine during thinning.

BIODIVERSITY NOTES: A subspecies of butterfly, the Shelton elfin (*Insicalia eryphon sheltonensis*), depends on lodgepole pine for food and is limited in Washington to Mason, Kitsap, and Pacific counties. State candidate Vancouver ground-cone (*Boschniakia hookeri*) has been recorded in this plant association.